WM-F9

SERVICE MANUAL

Refer to MDR-10L Service Manual issued previously for information of headphones supplied with this set.

AEP Model
UK Model
E Model

SPECIFICATIONS

Tape Transport Mechanism Type	MF-WMF8-06

Radio section

Frequency range	FM: 87.6–107 MHz (for European countries) 87.6–108 MHz (for other countries) AM: 530–1,605 kHz
Antenna	FM: Headphone cord antenna AM: Built-in ferrite bar antenna

Tape player section and general

Tape track	4-track 2-channel stereo
Fast winding time	Approx. 2 min. with Sony cassette C-60
Frequency response	40–15,000 Hz (with the TAPE selector set to METAL) 40–15,000 Hz (with the TAPE selector set to NORM)
Power output	25 mW + 25 mW (max) 15 mW + 15 mW (at 10% harmonic distortion) load impedance 32 ohms
Power requirements	3 V dc, two batteries, IEC designation R6 (size AA)
Battery life	

Batteries	FM reception	Tape playback
Sony New Super SUM-3(NS)	20	3
Sony Eveready AM3 alkaline	40	6

(hours)

For maximum performance we recommend the use of alkaline batteries.

Dimensions	Approx. 86 × 142 × 36.5 mm (w/h/d) ($3\frac{1}{2} \times 5\frac{5}{8} \times 1\frac{7}{16}$ inches) not incl. projecting parts and controls
Weight	Approx. 320 g (11.3 oz) incl. batteries, not incl. other accessories

MICROFILM

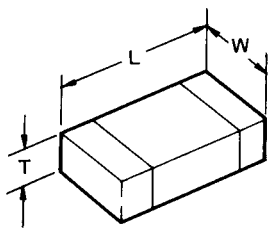
FM/AM STEREO CASSETTE-PLAYER

SONY®

TC

Chip components

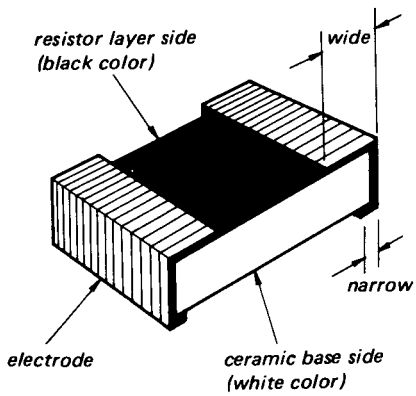
Chip components include resistors, capacitors, transistors, diodes, coil and adjustable resistors.
In this section, the types of resistors, ceramic capacitors, transistors and diodes which are used most frequently will be described.
Dimension of transistors and capacitors



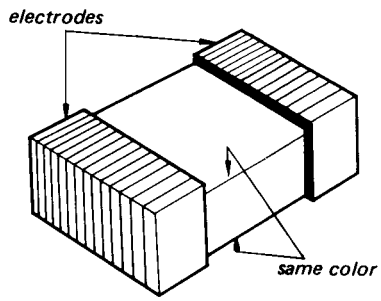
(Unit: mm)

Type	L	W	T
3216	3.2	1.6	0.45 ~ 0.6
2125	2.0	1.25	0.35 ~ 0.5

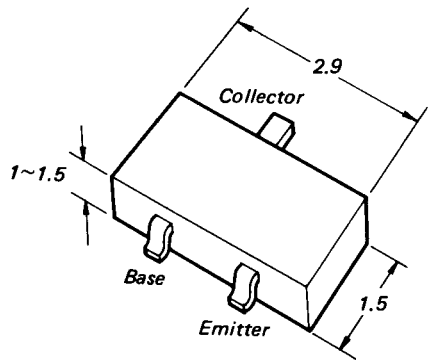
Identification



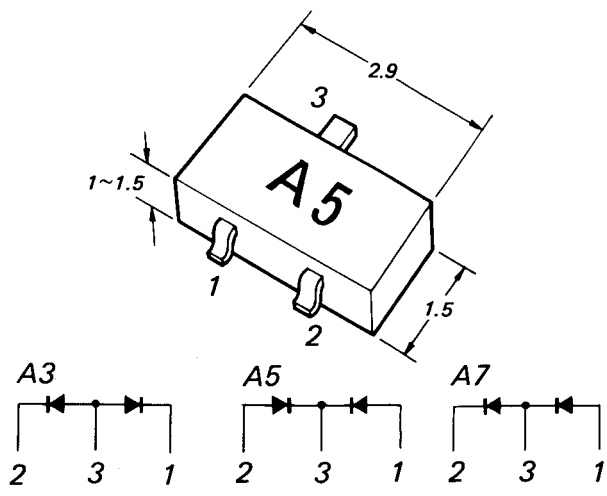
Resistor



Laminated Ceramic Capacitor



Transistor



Diode

Replacing chip components

All chip components should be connected and disconnected, using a tapered soldering iron [temperature of the iron tip: less than 280°C (536°F)], a pair of tweezers and braided wire.

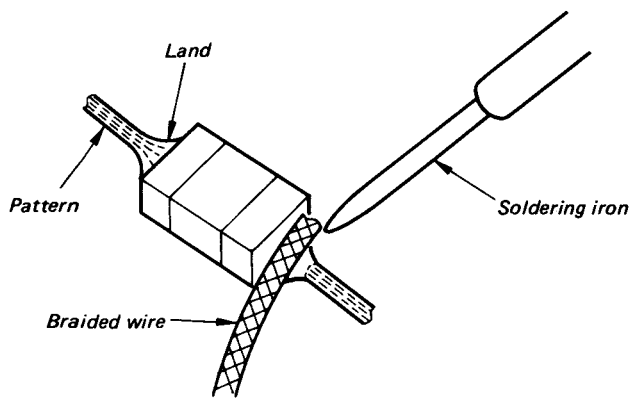
Precautions for replacement

1. **Do not disconnect the chip component forcefully. Otherwise, the pattern may peel off.**
2. **Never re-use a disconnected chip component. Dispose of all old chip components.**
3. **To protect the chip component, heating time for attaching the component should be within 3 seconds.**

○ **Removing chip components**

(1) Removing solder at electrode

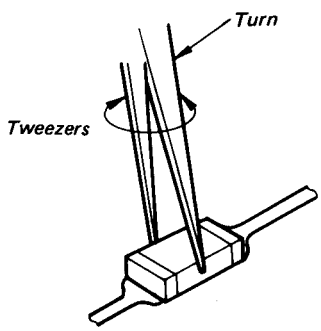
Remove the solder at the electrode, using a thin braided wire. Do not remove the solder of the part (chip component) attached adjacent to the electrode.



(2) Disconnecting chip components

Turn the tweezers with the soldering iron alternately applied to both electrodes, and the chip component will be disconnected. Take careful precautions while disconnecting, because if the chip component is forcefully removed the land may peel off.

Never re-use a disconnected chip component.



(3) Smoothing the soldered surface

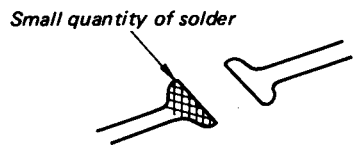
After disconnecting the chip component, remove the solder by using a braided wire to smooth the land surface.

○ **Connecting chip components**

The value of chip components is not displayed on the main body. Take due precautions to avoid mixing new chip components with other ones.

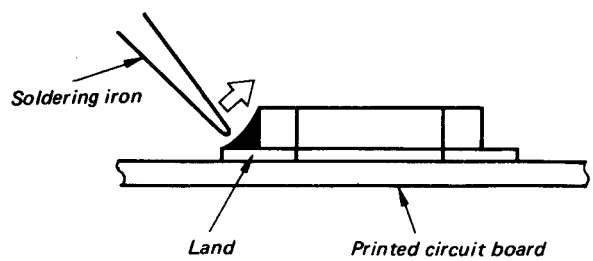
(1) Applying solder to land on one side

Apply a thin layer of solder to the land on one side where the chip component is to be connected. Too much solder may cause bridging.



(2) Speedy soldering

Hold the chip component at the desired position, using tweezers, and apply the soldering iron in the arrow-marked direction. To protect the chip component, heating time should be within 3 seconds.



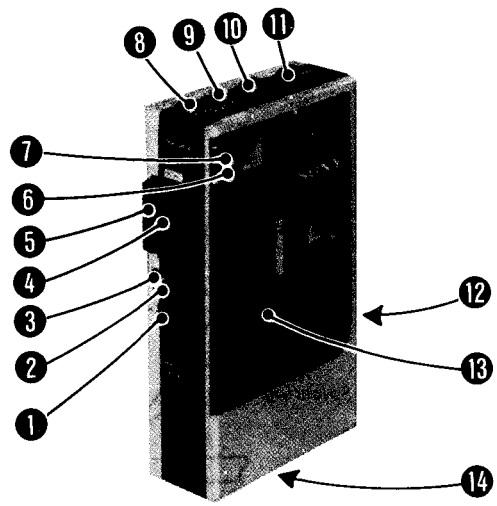
(3) Speedy soldering of electrode on the other side

Solder the electrode on the other side in the same way as in (2) above.

PARTS IDENTIFICATION

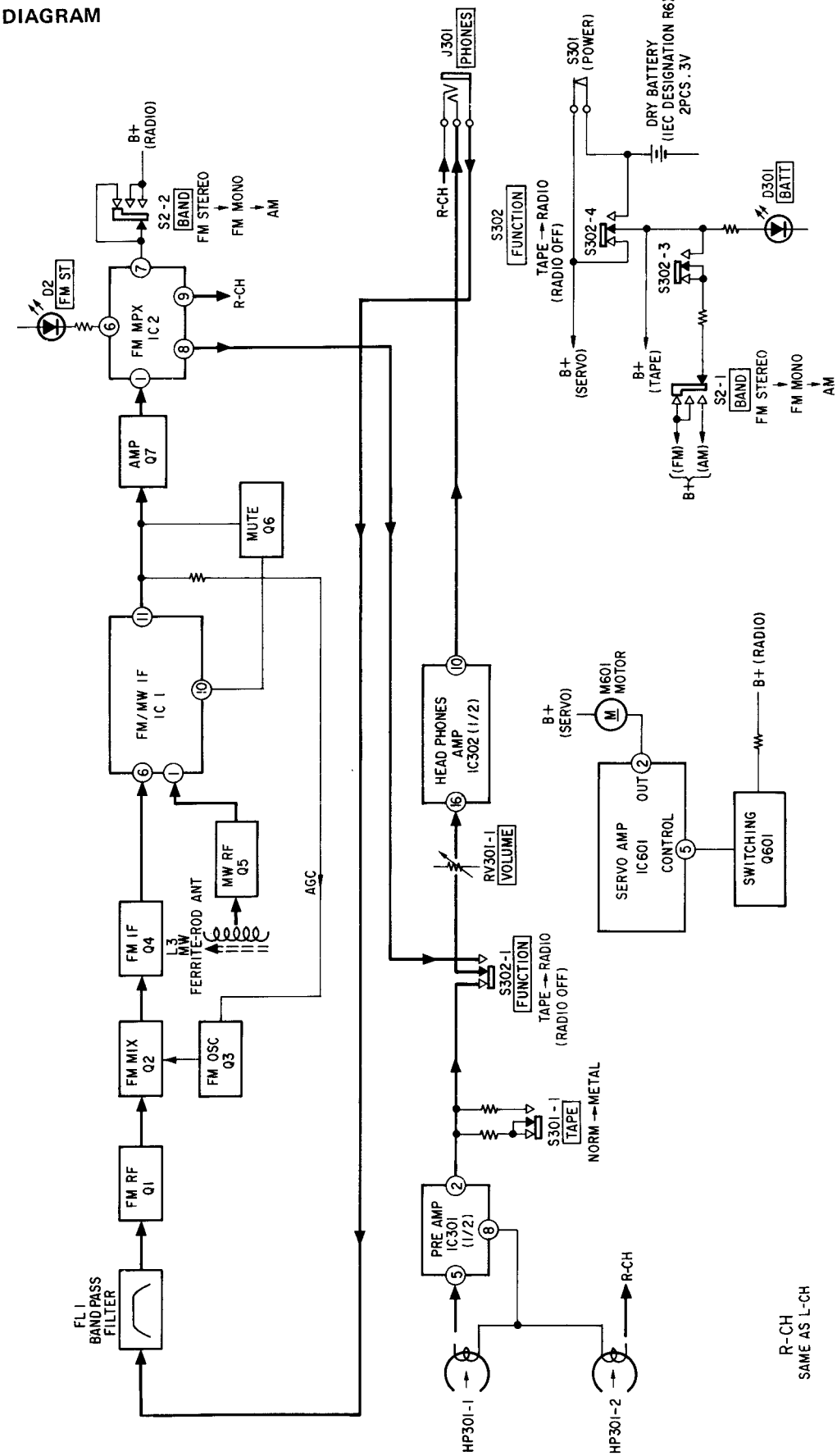
For identifying the parts of the WALKMAN, refer to photo [E] on page 5.

❶ ▼▼ (fast forward) button
❷ ▲▲ (rewind) button
❸ TAPE selector (METAL/NORM)
❹ ▼ (playback) button
❺ ■ (stop/eject) button
❻ BATTERY (operation/battery) indicator
❼ FM STEREO indicator
❽ Function selector (RADIO/TAPE)
❾ PHONES (headphones) jack
❿ VOL (volume) control
⓫ TUNING knob
⓬ BAND selector
⓭ Cassette holder
⓮ Battery compartment (rear)



SECTION 1
OUTLINE

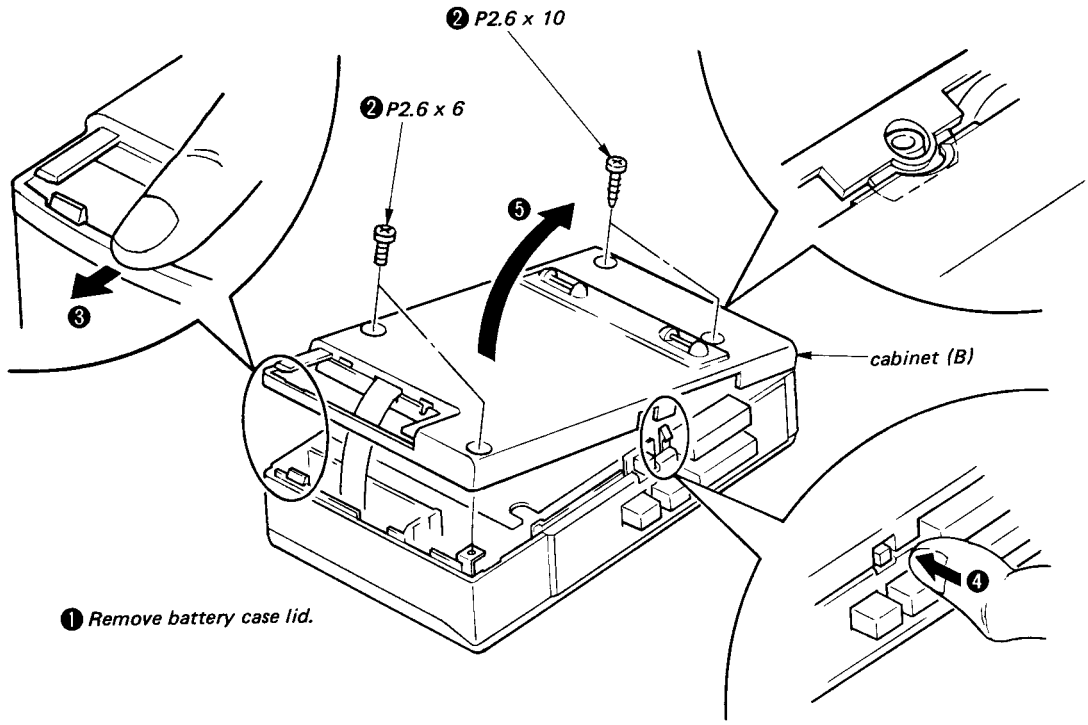
1-1. BLOCK DIAGRAM



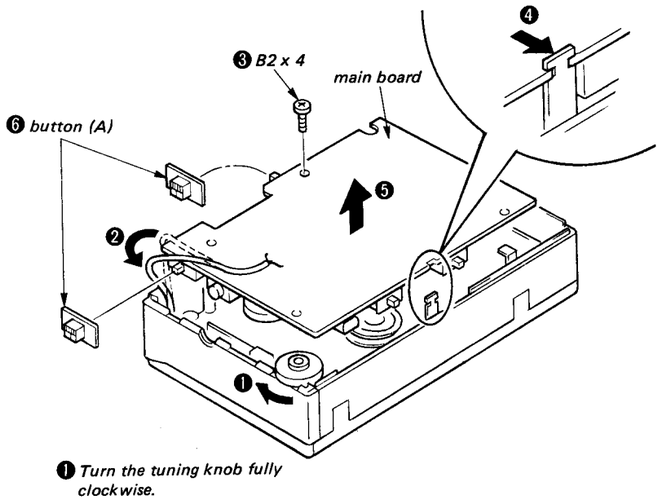
SECTION 2
DISASSEMBLY

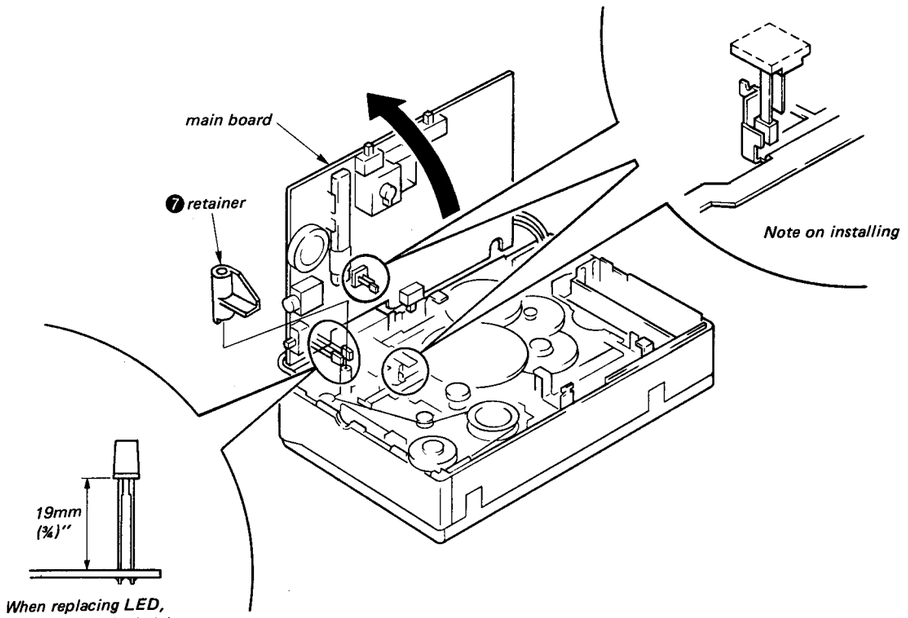
Note: Follow the disassembly procedure in the numerical order given.

CABINET (B)

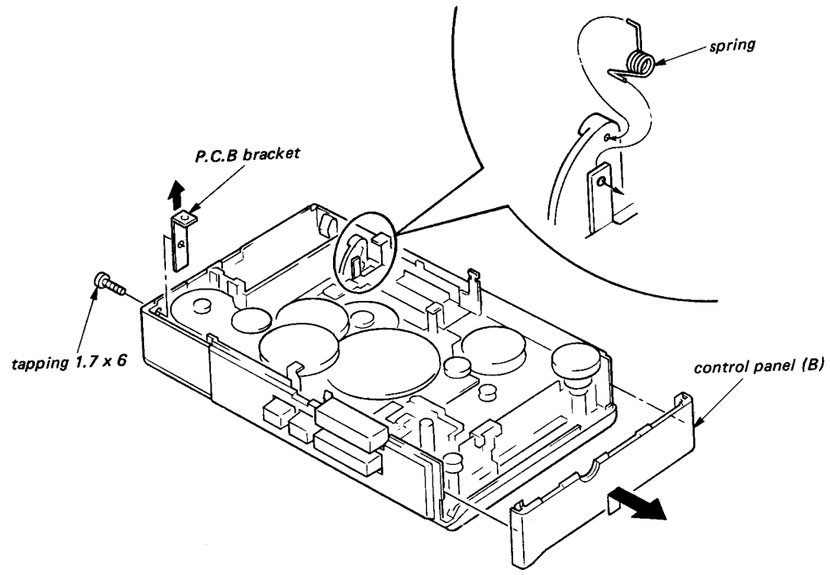


MAIN BOARD

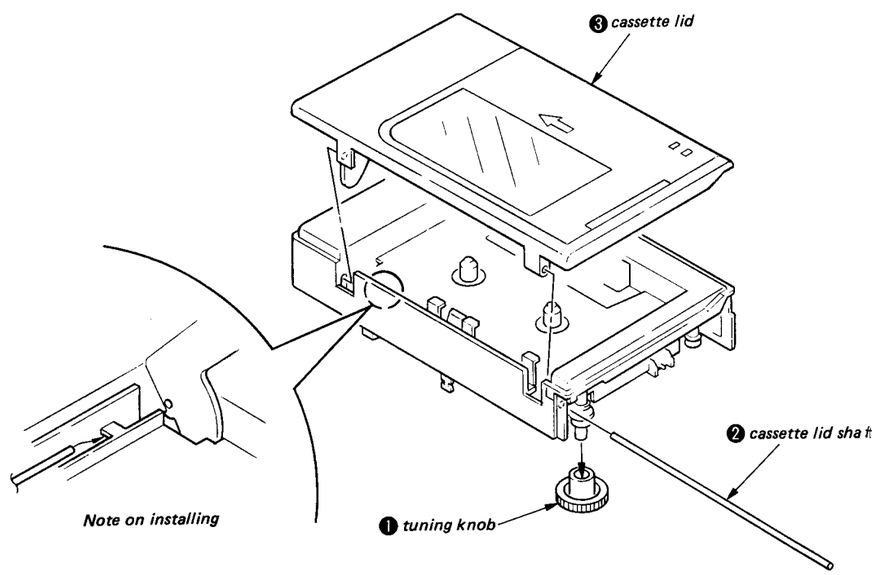




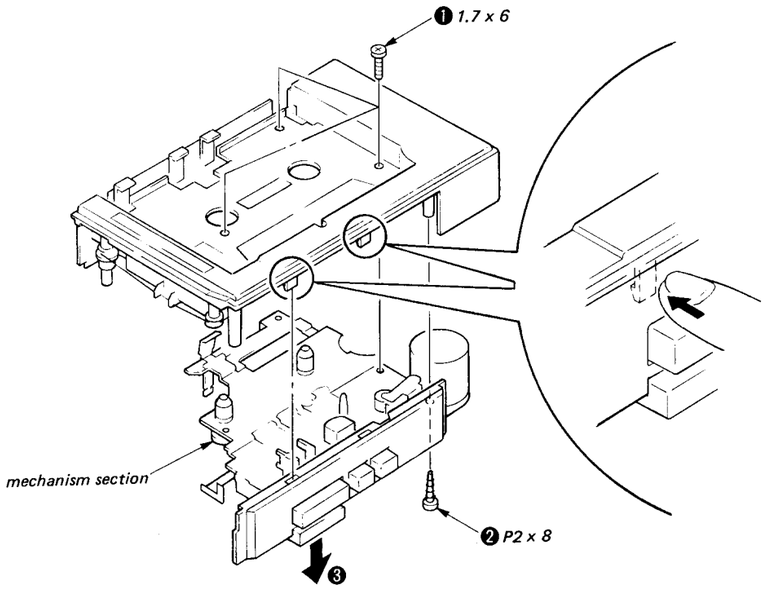
SPRING/P.C.B BRACKET/CONTROL PANEL (B)



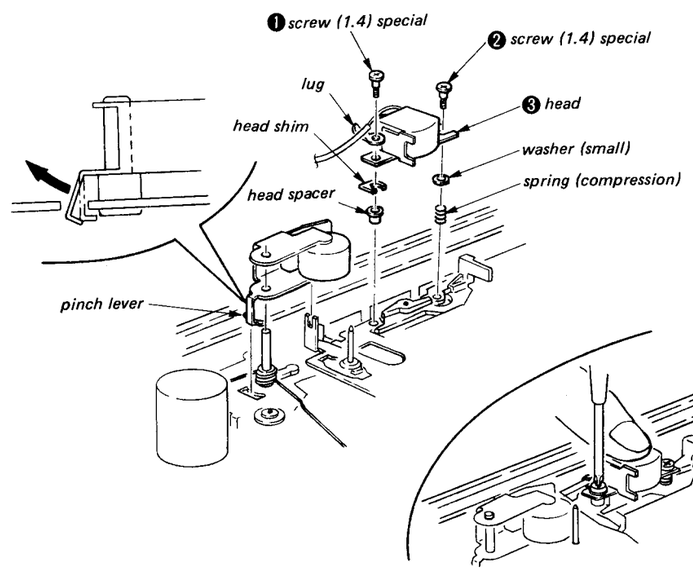
CASSETTE LID

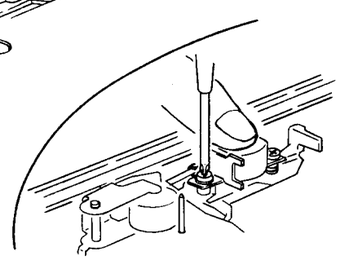


MECHANISM SECTION



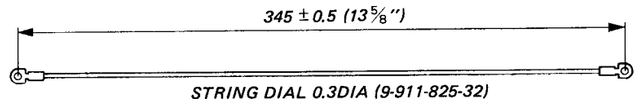
HEAD/PINCH LEVER

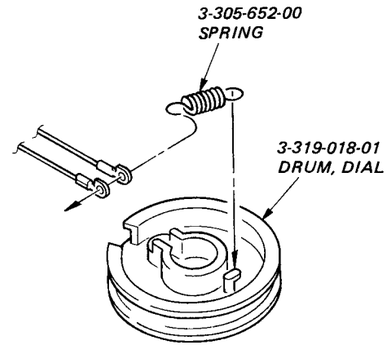




When loosening the screw, hold the head with the finger.

DIAL CORD PREPARATION

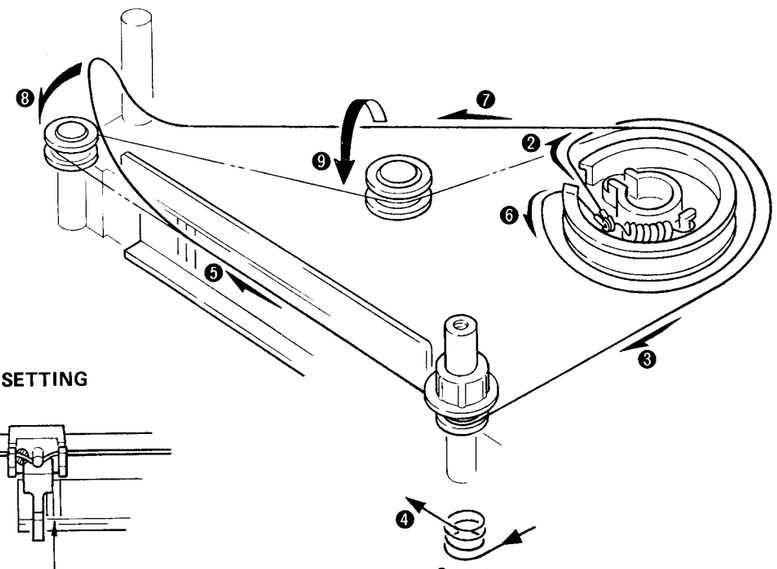




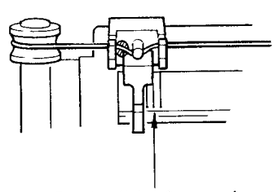
DIAL CORD STRINGING

❶ Turn the dial drum fully clockwise.

String the dial cord in the numerical order given.



DIAL POINTER SETTING



Set the dial pointer as shown in the illustration.

SECTION 3
ADJUSTMENTS

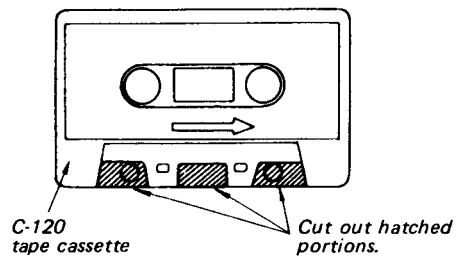
3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

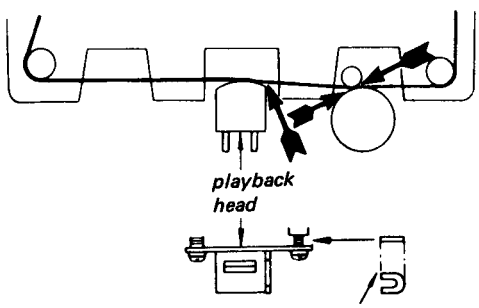
1. Clean the following parts with a denatured-alcohol-moistened swab:
   - playback head
   - pinch roller
   - capstan
   - idlers
   - rubber belts
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Head Height Adjustment

1. Prepare an adjustment cassette as shown below.



2. In playback mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at portions shown by arrow.



3-578-138-01 (t=0.1)
3-578-138-11 (t=0.2)
Shim, head height adjustment

Torque Measurement

Torque	Meter Reading	Torque Meter
Forward	27–48 g·cm (0.35–0.63 oz·inch)	CQ-102B
Fast Forward and Rewind	55–75 g·cm (0.77–1.05 oz·inch)	CQ-201B
Back Tension	2–4 g·cm (0.028–0.056 oz·inch)	CQ-102B

Tape Tension Measurement

Meter	Meter Reading
CQ-403A	more than 120 g (4.23 oz)

3-2. ELECTRICAL ADJUSTMENTS

CASSETTE Section

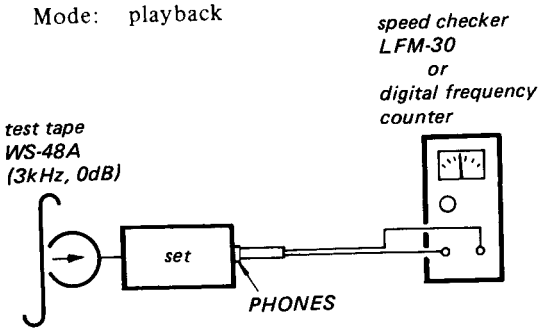
Tape Speed Adjustment

Setting:

VOL control: mechanical mid

Procedure:

Mode: playback



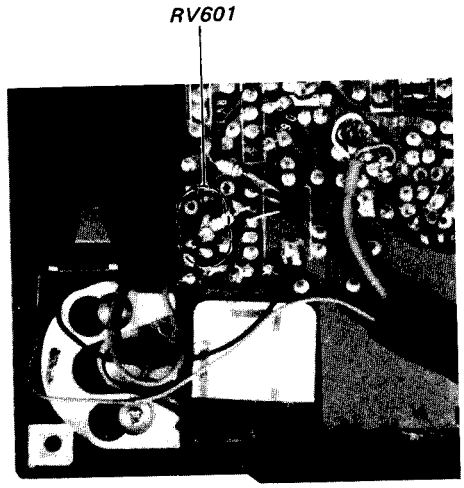
Specifications:

Speed checker
−1 – +1%

Digital frequency counter
2970 – 3030Hz

Frequency difference between beginning and end of tape should be within ±2% (60Hz).

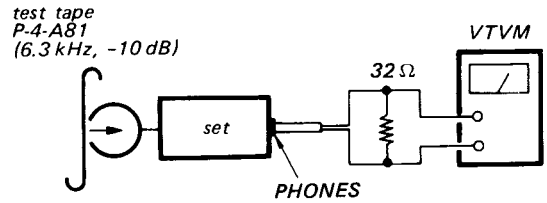
Adjustment Location:



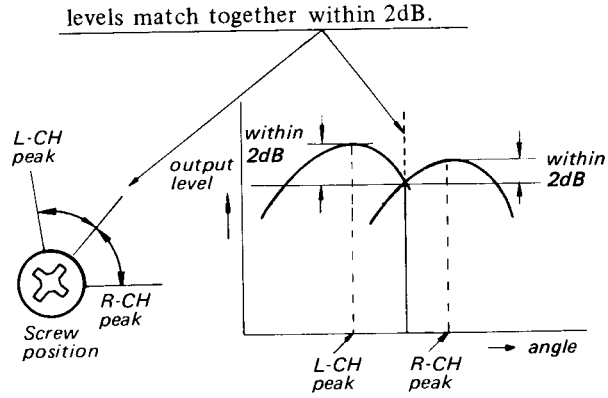
Playback Head Azimuth Adjustment

Procedure:

1. Mode: playback

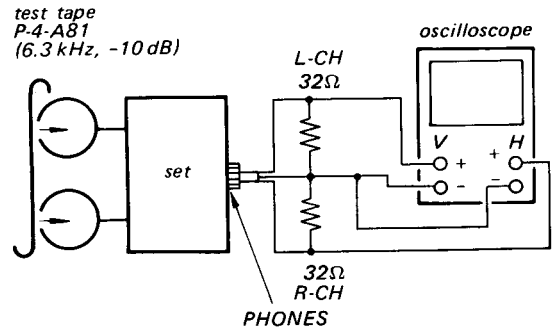


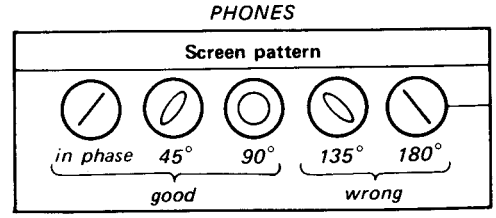
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw where both of output levels match together within 2dB.



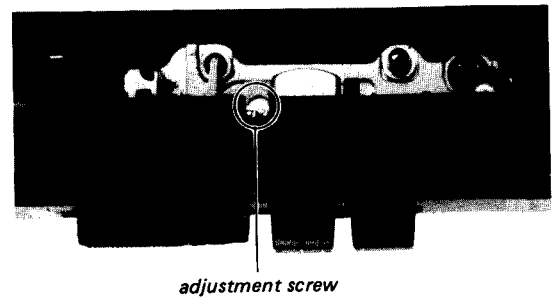
3. Phase Check

Mode: playback



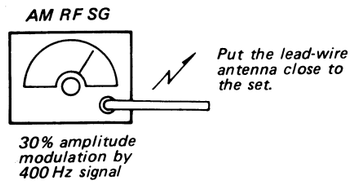


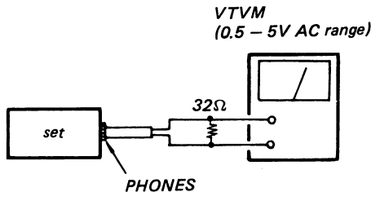
Adjustment Location:



AM Section

- **Setting:**
  FUNCTION Switch: RADIO
  Band Switch: AM



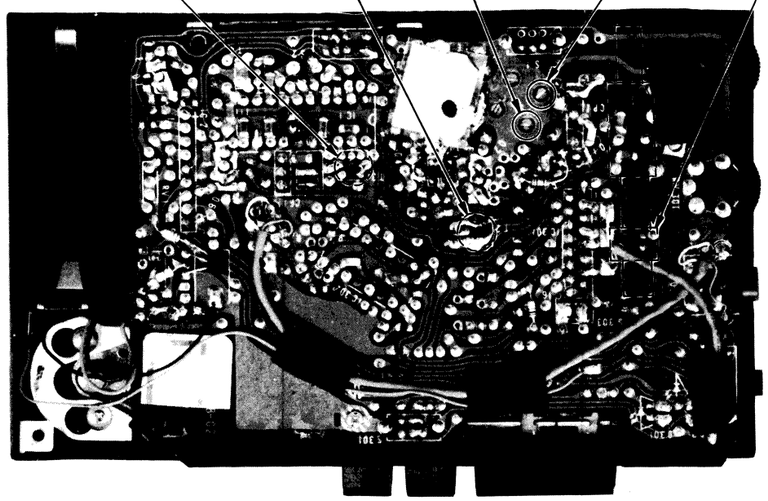


- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM IF ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
455kHz	T3

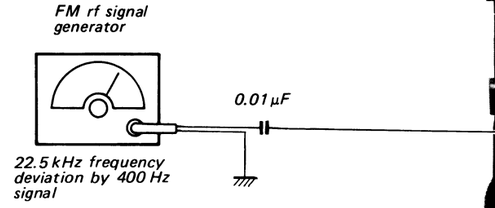
AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
520kHz	1,680kHz
T2	CT4

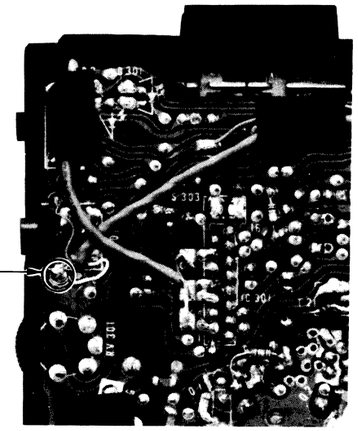
AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
1,400kHz	620kHz
CT3	L3 (MW ANT)

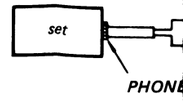


FM Section

Setting:
FUNCTION switch: RADIO
BAND switch: FM
FM SENS switch: DX



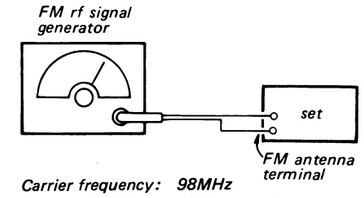




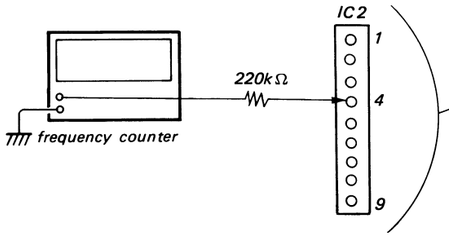
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

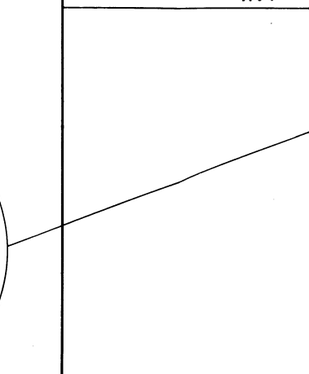
VCO Adjustment

Procedure:

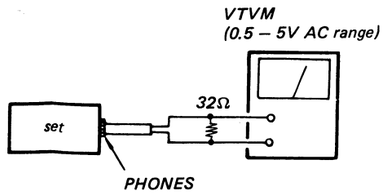


Carrier frequency: 98MHz
Modulation: 1kHz deviation (30%)
Output level: 562μV (55dB)





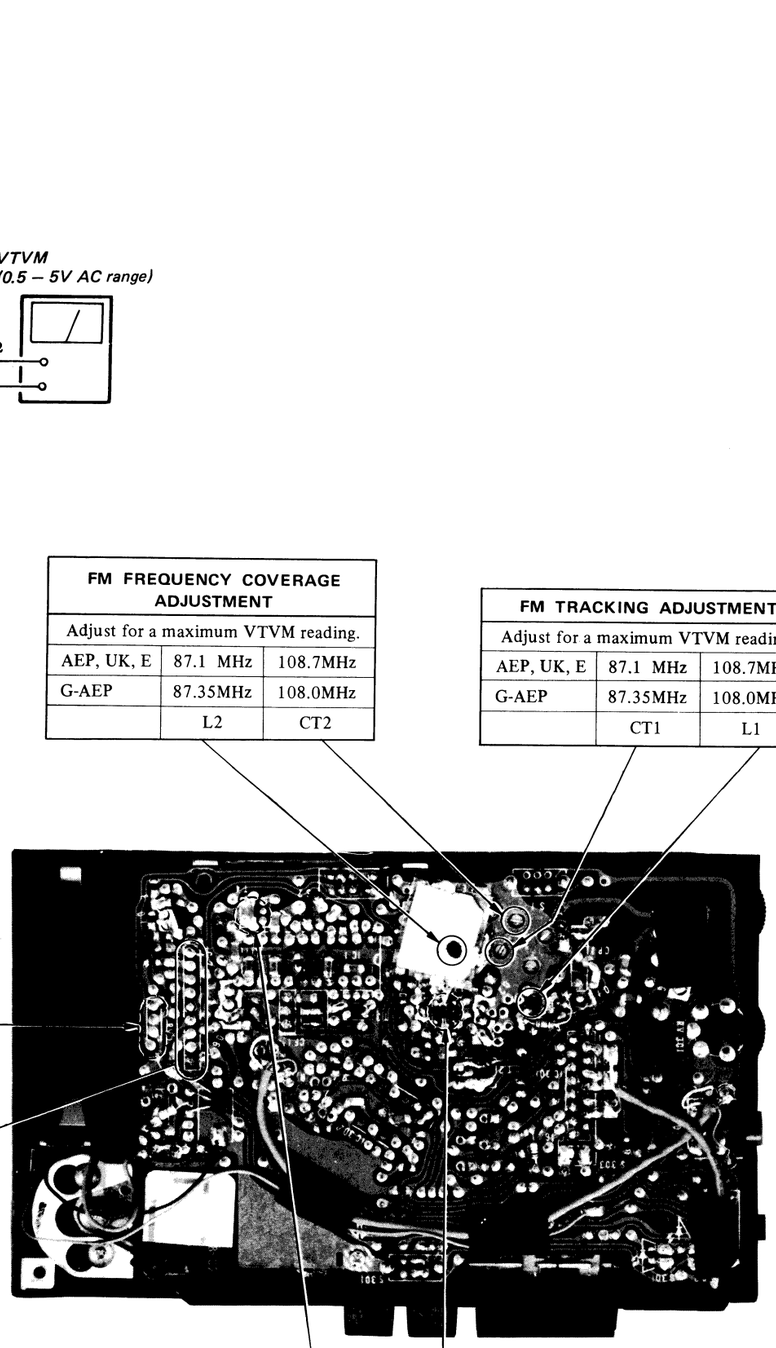
1. Tune the set to 98MHz.
2. Adjust RV1 for 76kHz ±400Hz on the counter.



FM FREQUENCY COVERAGE ADJUSTMENT		
Adjust for a maximum VTVM reading.		
AEP, UK, E	87.1 MHz	108.7MHz
G-AEP	87.35MHz	108.0MHz
	L2	CT2

FM TRACKING ADJUSTMENT		
Adjust for a maximum VTVM reading.		
AEP, UK, E	87.1 MHz	108.7MHz
G-AEP	87.35MHz	108.0MHz
	CT1	L1

RV1

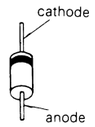


T4	T1
Adjust for a maximum reading on VTVM.	
FM IF ADJUSTMENT	

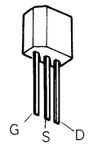
ter.

- **Semiconductor Lead Layouts**

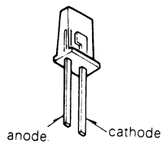
1S2687S-1
1SS119



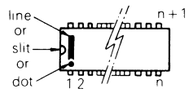
2SK192A



SR632D



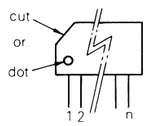
TA7688P
LA1270



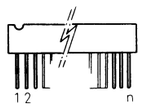
(Top view)

2SC668D-SP
2SC668E-SP
2SC2840-D
2SC2840-E
2SC2724
2SC2458

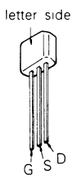
TA7342P



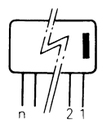
BA3304L



2SK193



LA5523



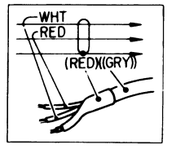
(Marking side view)

4-1. MOUNTING DIAGRAM

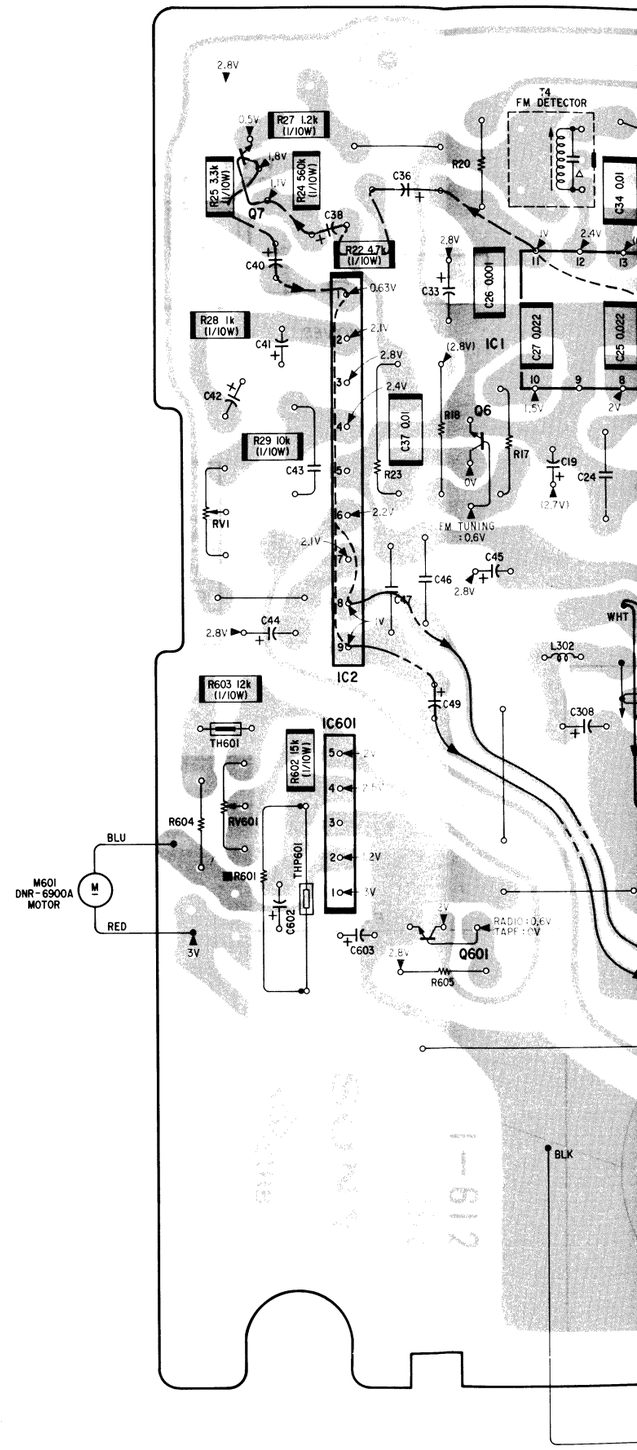
【MAIN BOARD】

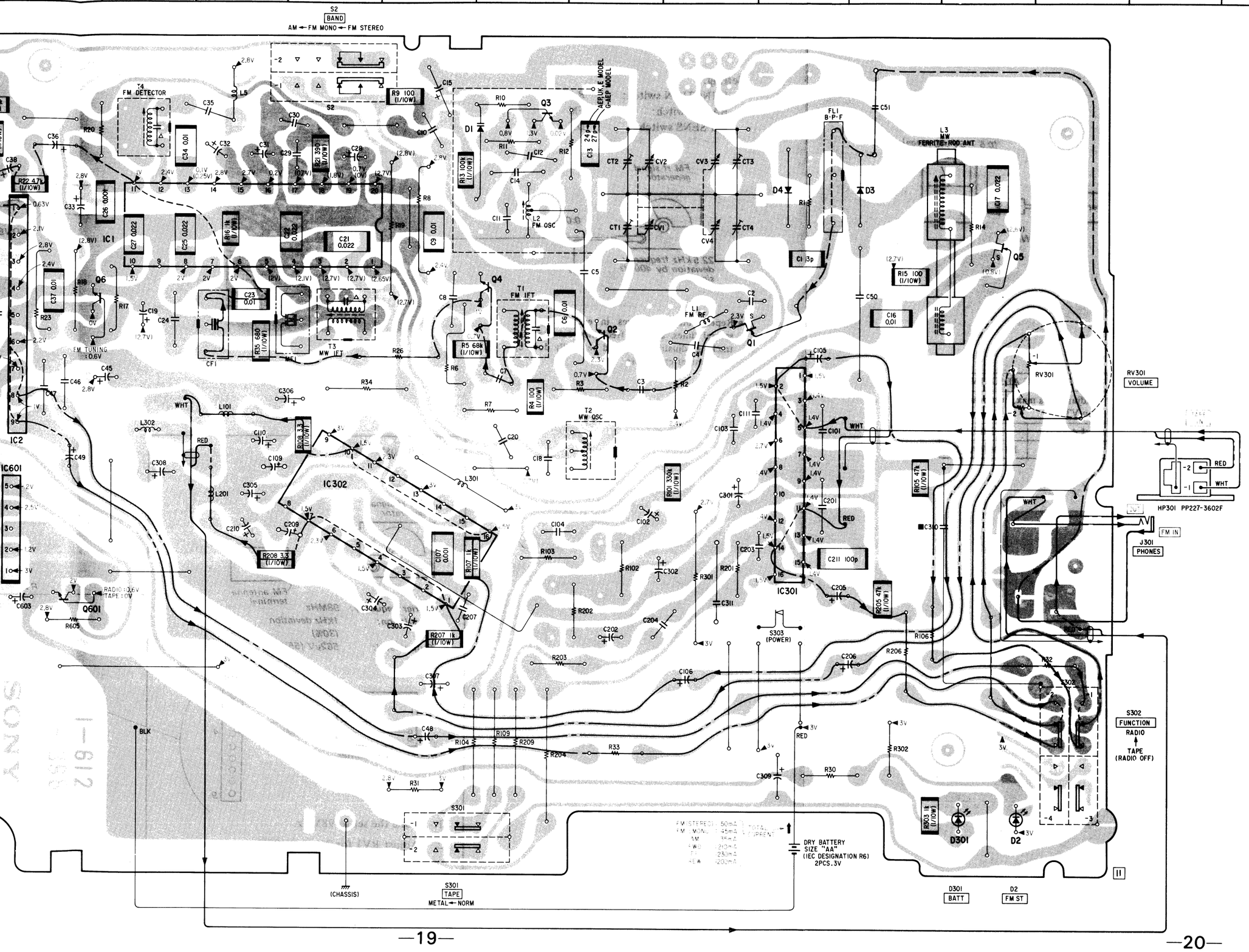
Note:

- Color code of sleeving over the end of the jacket.



- ○— : parts extracted from the component side.
- ●— : parts extracted from the conductor side.
- ■ : part mounted on the conductor side.
- [ ]— : indicates side identified with part number.
- : B + pattern
- ▬▶▬ : signal path
- ▬▶▬ : L-CH signal path
- ▬▶▬ : R-CH signal path

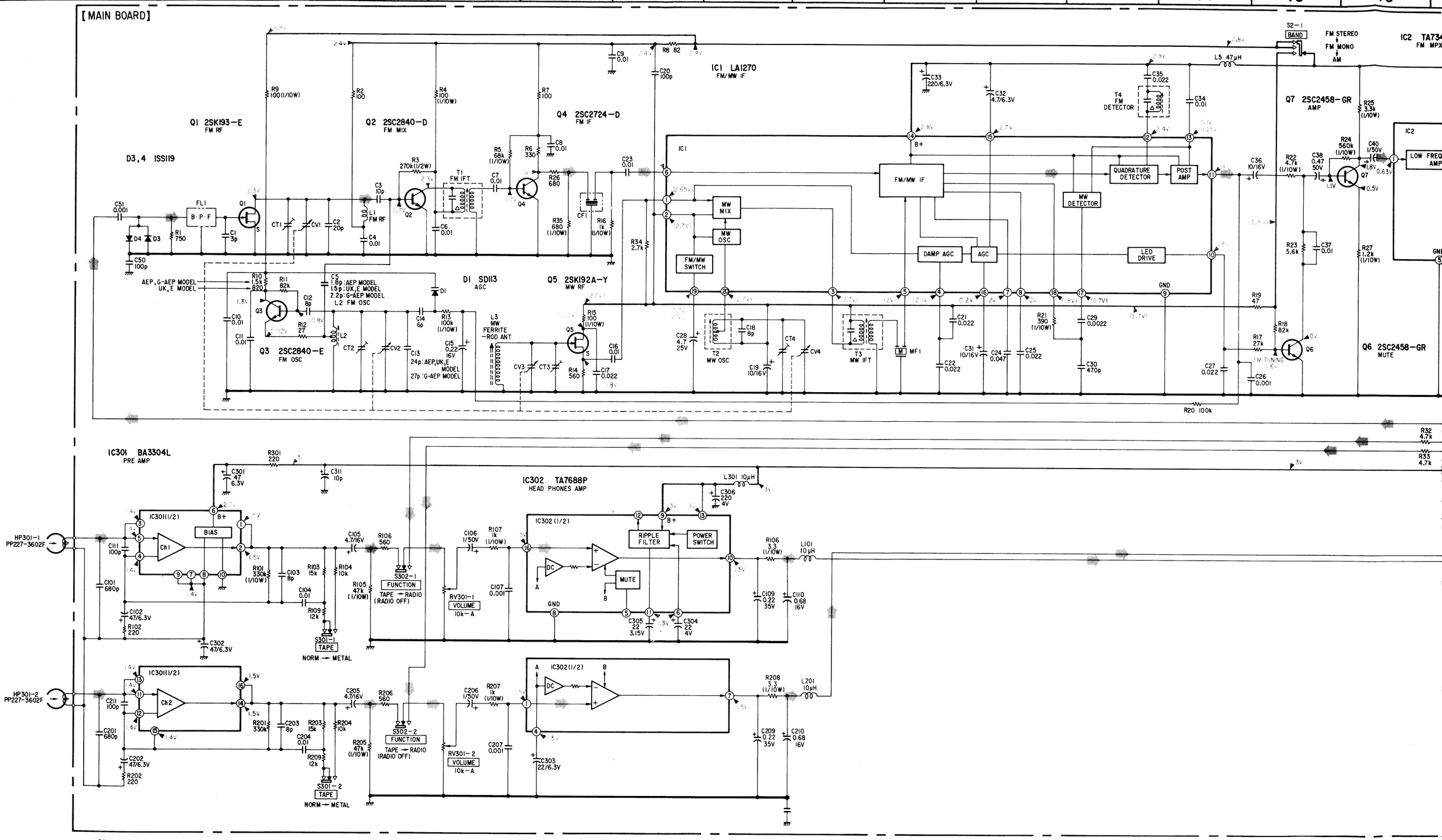




IC , Q	D
3	
7	1
	4,3
IC1	
5	
IC2	
4	
6	
2	1
IC301	
IC601	
IC302	
601	
	301,2
IC , Q	D

4-2. SCHEMATIC DIAGRAM

【MAIN BOARD】



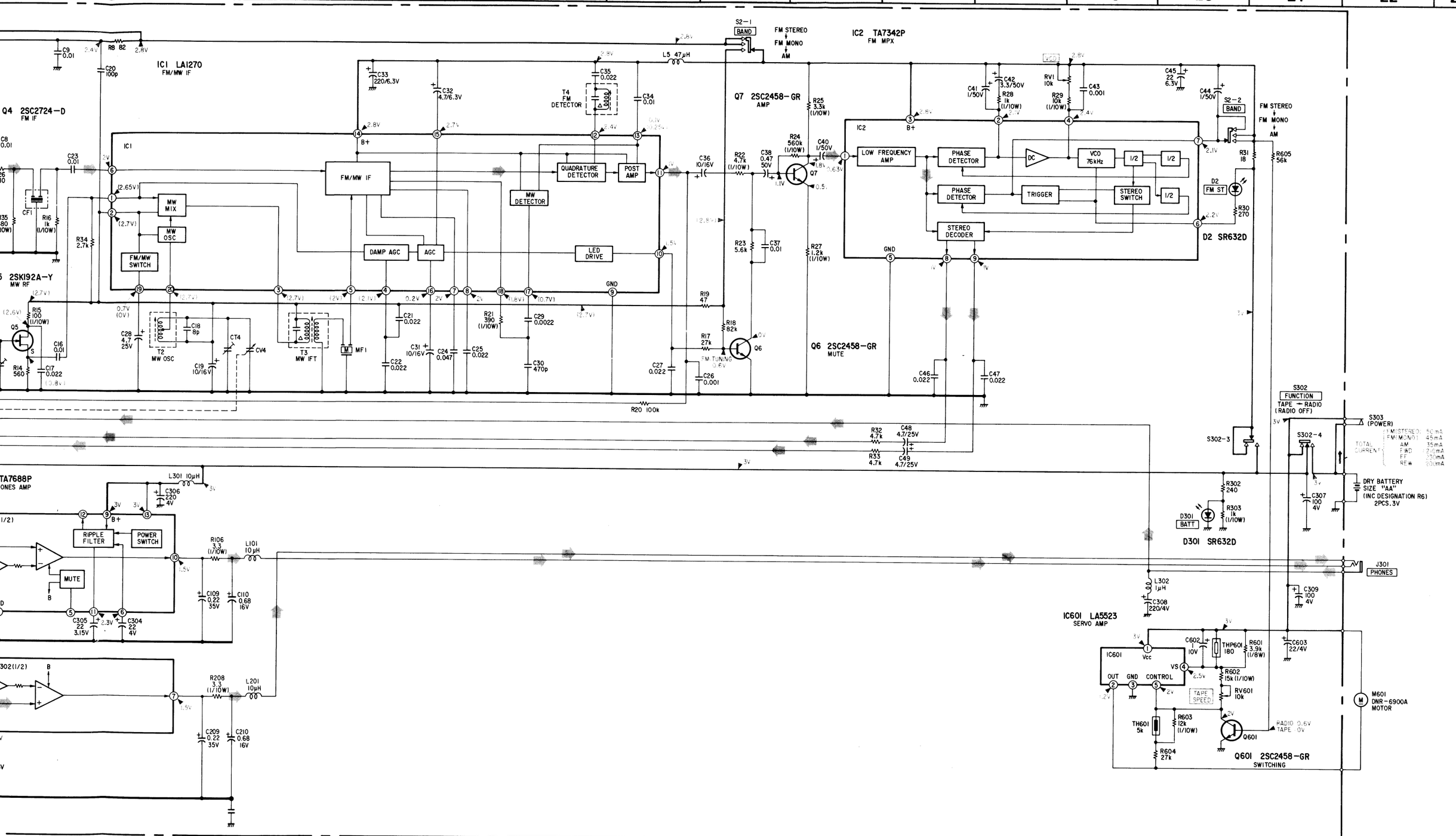
Note:

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/6W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- △ : internal component.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——— B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (50kΩ/V). ( ) : AM
- Voltage variations may be noted due to normal production tolerances.
- Total current is measured with no cassette installed.
- Switch

Ref. No.	Switch	Position
S2	BAND	FM STEREO
S301	TAPE	NORM
S302	FUNCTION	TAPE (RADIO OFF)
S303	POWER	

- ▰ : signal path

Note: Voltage



- Readings are taken under no-signal (detuned) conditions with a VOM (50kΩ/V).
  ( ) : AM
- Voltage variations may be noted due to normal production tolerances.
- Total current is measured with no cassette installed.

- Switch

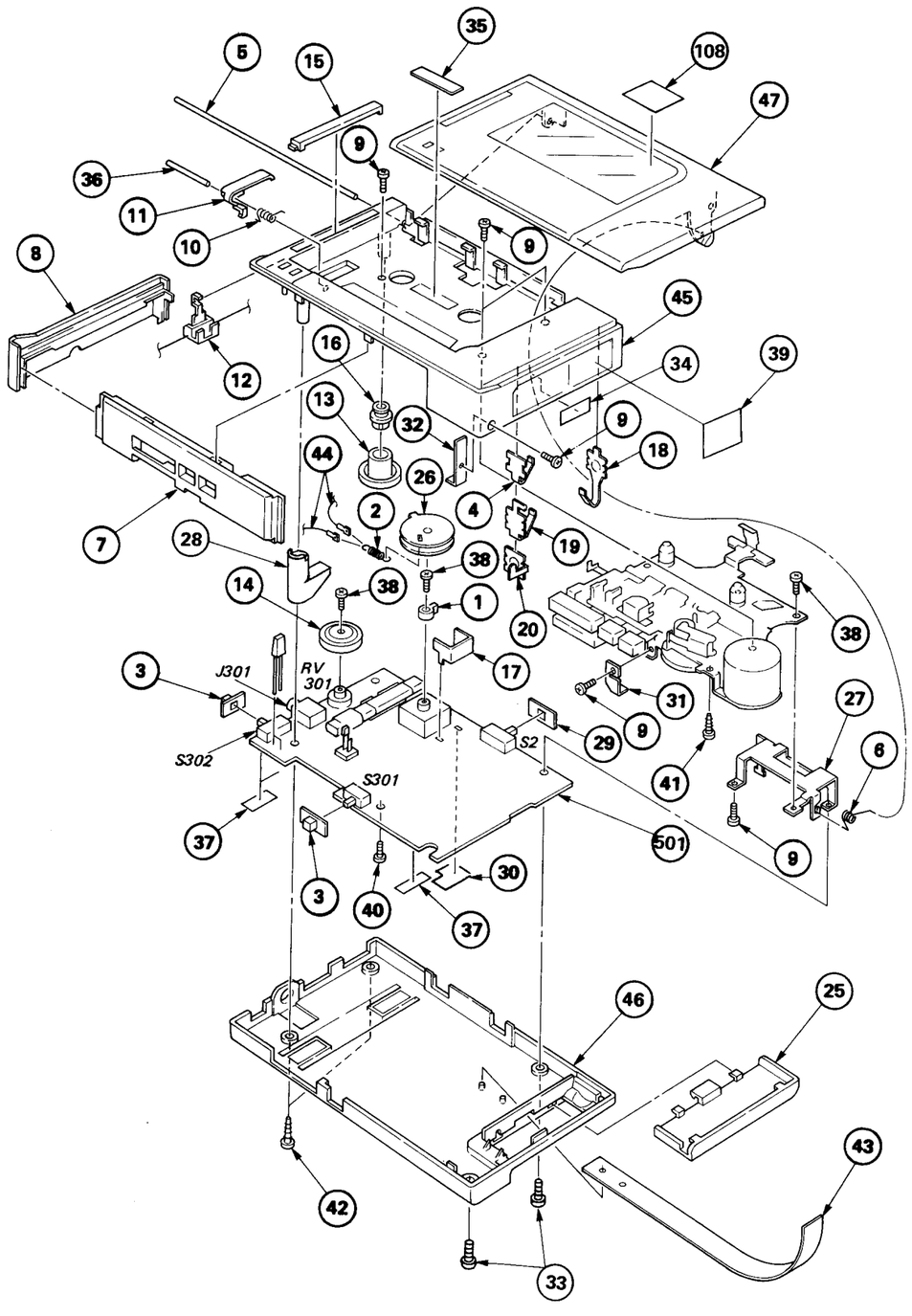
Ref. No.	Switch	Position
S2	BAND	FM STEREO
S301	TAPE	NORM
S302	FUNCTION	TAPE (RADIO OFF)
S303	POWER	

- ➡ : signal path

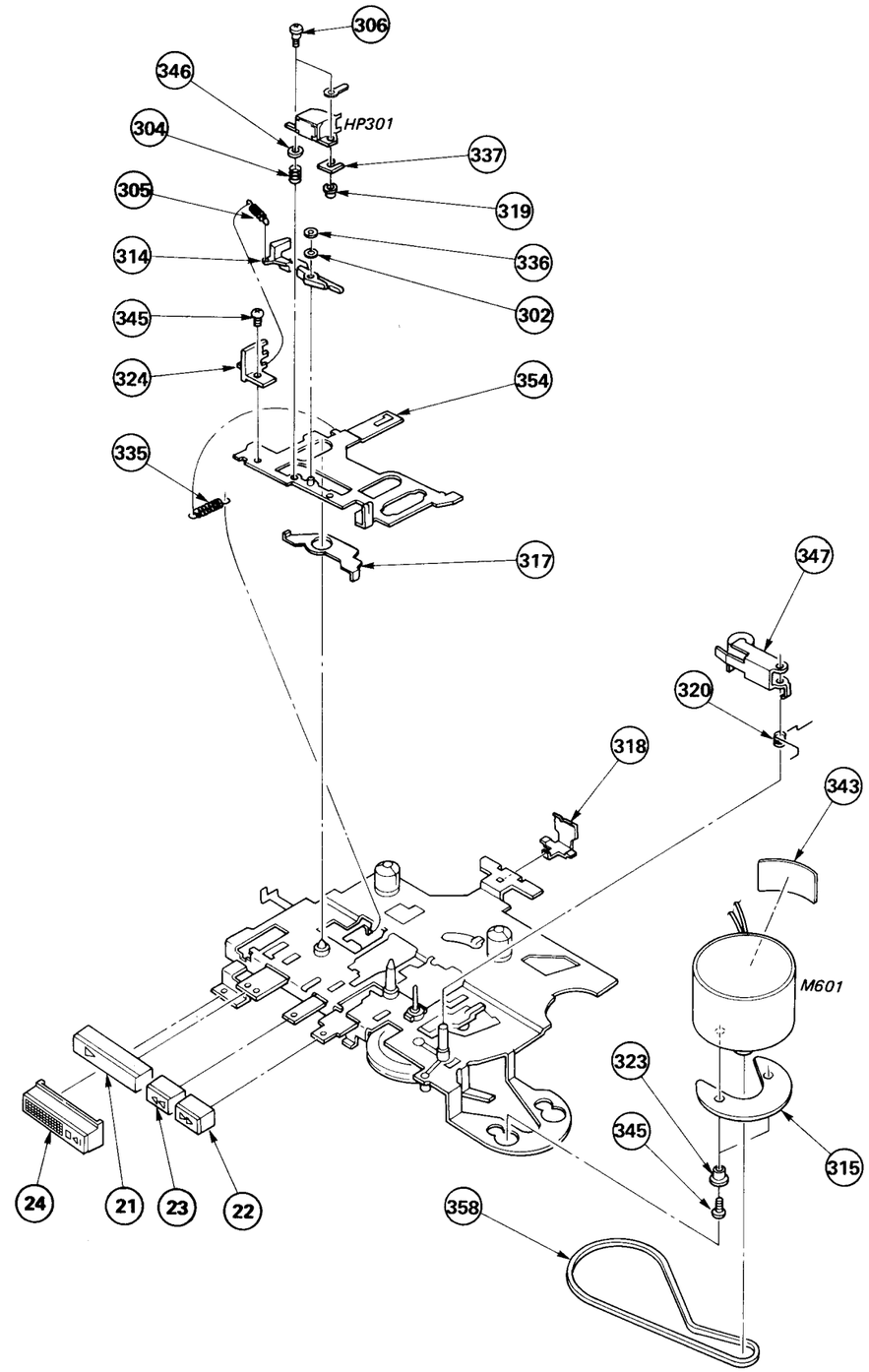
Note: Voltages are measured with a VOM (50kΩ/V).

SECTION 5
EXPLODED VIEWS AND PARTS LIST

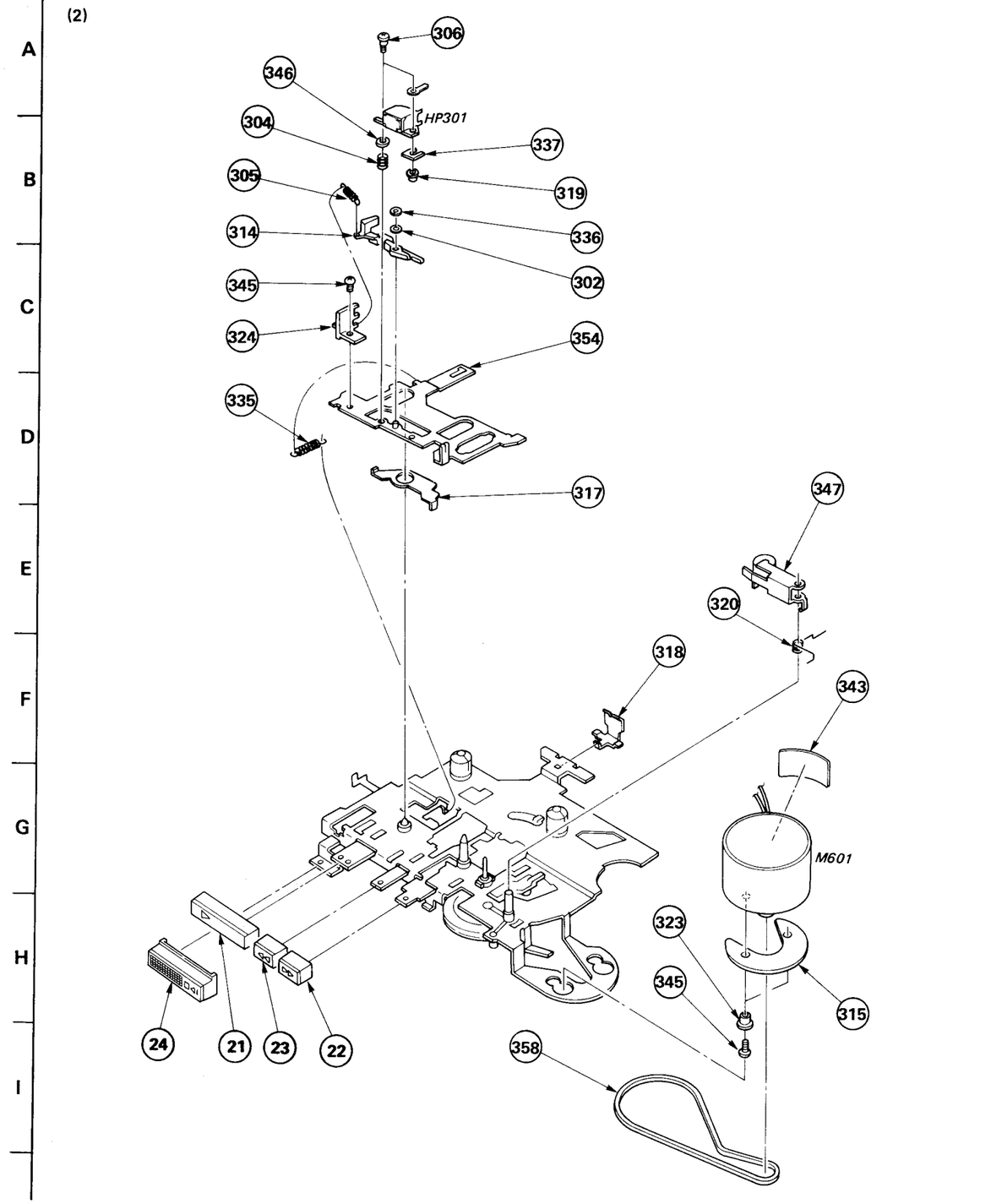
(1)



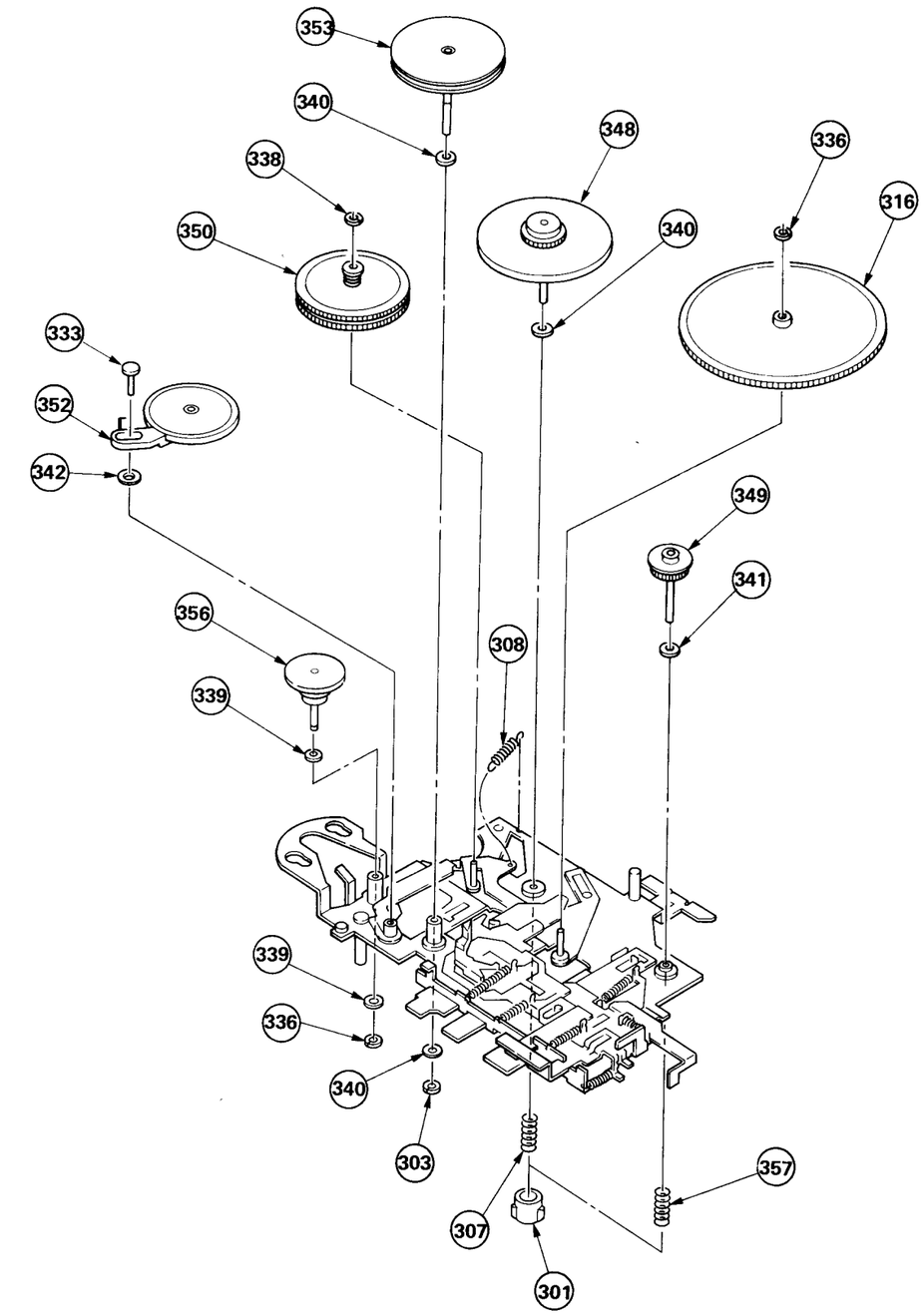
(2)

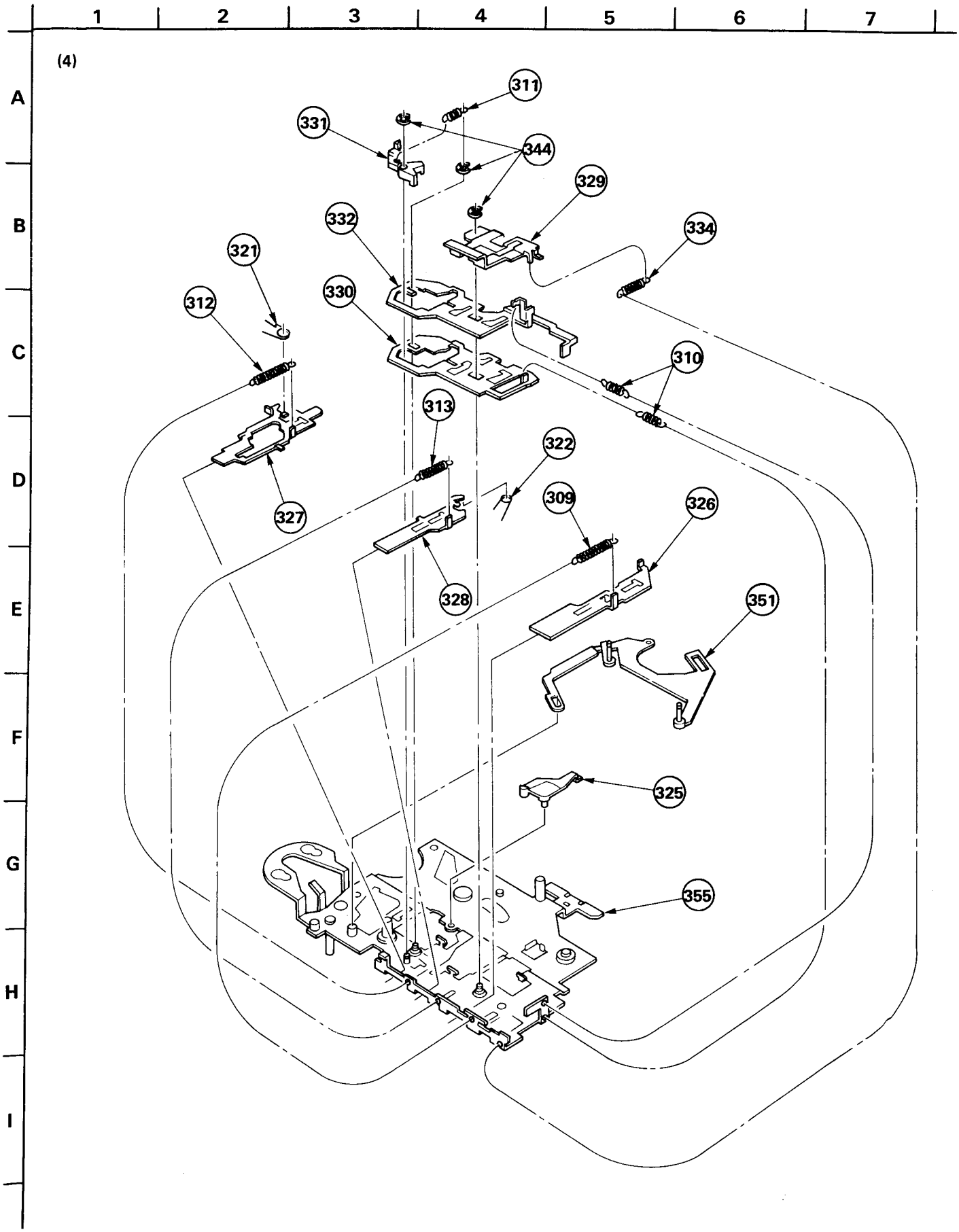


(2)


306
346
HP301
304
337
305
319
314
336
302
345
324
354
335
317
347
320
318
343
M601
323
345
315
358
24
21
23
22

(3)


353
340
348
336
338
316
350
340
333
352
342
349
341
356
308
339
339
336
340
303
357
307
301


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
(4)
311
331
344
329
332
334
321
330
312
310
313
322
309
326
327
328
351
325
355

GENERAL SECTION

No.	Part No.	Description
1	3-305-625-00	CAP, TUNING CAPACITOR
2	3-305-652-00	SPRING, TENSION
3	3-309-411-11	BUTTON (A)
4	3-309-443-00	SPRING, LEAF
5	*3-310-707-00	SHAFT, CASSETTE LID
6	3-310-718-00	SPRING
7	3-316-120-11	PANEL (A), CONTROL
8	3-316-121-01	PANEL (B), CONTROL
9	3-318-203-11	SCREW (1.7X6), TAPPING
10	3-318-215-01	SPRING
11	3-318-226-01	LEVER, EJECT
12	3-319-001-01	POINTER
13	3-319-002-01	KNOB, TUNING
14	3-319-003-01	KNOB, CONTROL
15	3-319-004-01	WINDOW, DIAL
16	3-319-005-01	SHAFT, TUNING
17	3-319-007-01	CASE, SHIELD
18	3-319-009-01	TERMINAL BOARD (A), BATTERY
19	3-319-010-01	TERMINAL BOARD (C), BATTERY
20	3-319-011-01	TERMINAL BOARD (D), BATTERY
21	3-319-013-01	BUTTON, PLAY
22	3-319-014-01	BUTTON, FF
23	3-319-015-01	BUTTON, REW
24	3-319-016-01	BUTTON, STOP
25	3-319-017-21	(GOLD).....LID, BATTERY CASE
26	3-319-018-01	DRUM, DIAL
27	3-319-024-01	BRACKET, MD
28	3-319-038-01	RETAINER
29	3-319-039-01	PLATE, BLIND
30	*3-319-041-01	PAPER, SHIELD
31	*3-319-042-01	BRACKET, PC BOARD
32	*3-319-043-01	BRACKET, CABINET (B)
33	3-319-047-01	SCREW +P 2.6X6
34	3-527-213-00	LABEL, SERIAL NUMBER
35	3-578-101-00	PLATE, ORNAMENTAL
36	3-703-356-06	PIN, PARALLEL (DIA. 1.6X14)
37	3-831-441-XX	CUSHION, SPEAKER
38	3-880-990-00	SCREW (1.7X3), FLAT, (+) SPECIAL
39	4-310-379-01	(AEP)....LABEL, NAMKO
40	7-621-772-08	SCREW +B 2X3
41	7-685-105-14	TPG +P 2X8, TYPE 2, NON-SLIT
42	7-685-135-24	SCREW +P 2.6X10 TYPE2 SLIT
43	9-911-816-01	RIBBON, BATTERY
44	9-911-825-XX	STRING DIAL 0.3DIA

GENERAL SECTION

No.	Part No.	Description
45	X-3319-007-2	(BLACK:E,UK,AEP)...CABINET (A)
45	X-3319-007-3	(BLACK:G-AEP).....CABINET (A)
46	X-3319-008-4	(GOLD).....CABINET (B)
46	X-3319-008-5	(SILVER)...CABINET (B)
47	X-3319-009-5	(GOLD:E,UK,AEP)...LID, CASSETTE
47	X-3319-009-6	(GOLD:G-AEP).....LID, CASSETTE

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
101	3-316-115-01	SPACER
102	3-319-032-01	INDIVIDUAL CARTON
103	3-319-037-01	CUSHION
104	3-570-631-71	BAG, POLYETHYLENE
105	3-572-854-00	BELT, SHOULDER
106	3-701-624-00	(AEP,G-AEP)...BAG, POLYETHYLENE
107	3-703-539-01	(G-AEP)...INSTRUCITON, FTZ
108	3-703-707-01	STICKER, SONY SYMBOL (21)
109	3-773-826-11	MANUAL, INSTRUCTION
110	3-773-826-41	(AEP,G-AEP)...MANUAL, INSTRUCTION
111	8-951-080-90	HEADPHONE (MDR-10L)

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···,
UPC···: μPC,
UPD···: μPD···

MECHANISM SECTION

No.	Part No.	Description
301	3-306-836-02	CAP, REEL, T
302	3-308-472-21	WASHER, LUMILER (t=0.075)
302	3-308-472-31	WASHER, LUMILER (t=0.125)
303	3-318-236-01	WASHER, POLY, SLIT
304	3-318-237-01	SPRING, COMPRESSION
305	3-318-238-01	SPRING, TENSION
306	3-318-240-01	SCREW (1.4), SPECIAL
307	3-318-241-01	SPRING, COMPRESSION
308	3-318-243-00	SPRING, TENSION
309	3-318-246-01	SPRING, TENSION
310	3-318-248-01	SPRING, TENSION
311	3-318-249-01	SPRING, TENSION
312	3-318-250-01	SPRING, TENSION
313	3-318-251-01	SPRING, TENSION
314	3-318-252-01	ARM, DETECTION
315	3-318-254-01	CUSHION, MOTOR
316	3-318-265-01	GEAR (B), FR
317	*3-318-267-01	LEVER, CR
318	3-318-269-01	SPRING
319	3-318-272-01	SPACER, HEAD
320	3-318-275-01	SPRING
321	3-318-276-02	SPRING
322	3-318-277-01	SPRING, REW
323	*3-318-278-01	COLLAR, MOTOR
324	3-318-287-01	GUIDE, TAPE
325	3-318-288-01	ARM, FF
326	*3-318-290-01	LEVER, PLAY
327	3-318-291-01	LEVER, FR
328	3-318-292-02	LEVER, REW
329	*3-318-293-01	LEVER, STOP
330	*3-318-294-01	PLATE, LOCK
331	3-318-296-01	LEVER, SHUT-OFF
332	3-318-300-00	LEVER, SWITCH
333	3-318-324-01	BUSHING, LEVER, IDLER
334	3-547-669-00	SPRING, TENSION
335	3-565-927-00	SPRING, TENSION
336	3-570-615-00	POLY-WASHER (DIA.1.2)
337	3-578-138-01	SHIM, HEAD ADJUSTMENT(t=0.1)
337	3-578-138-11	SHIM, HEAD ADJUSTMENT(t=0.2)
338	3-578-265-11	RING, STOPPER
339	3-701-436-01	WASHER, 1.6
340	3-701-437-01	WASHER (t=0.13)
341	3-701-437-11	WASHER (t=0.25)
342	3-827-323-11	WASHER, LUMILER (t=0.075)
343	3-831-441-XX	CUSHION
344	7-624-101-01	RING, RETAINING E-1.2
345	7-627-552-47	SCREW, PRECISION +P 1.7X4

MECHANISM SECTION

No.	Part No.	Description
346	7-688-001-01	WASHER (SMALL)(DIA.2.0)
347	A-3110-010-A	PINCH LEVER ASSY
348	X-3318-202-1	CLUTCH ASSY
349	X-3318-204-1	GEAR ASSY, REW
350	X-3318-207-1	GEAR (A) ASSY, FR
351	X-3318-208-1	LEVER ASSY, FR
352	X-3318-210-1	LEVER ASSY, FWD IDLER
353	X-3318-211-1	FLYWHEEL ASSY
354	X-3318-213-1	CHASSIS ASSY, HEAD
355	X-3318-214-1	CHASSIS ASSY, MECHANICAL
356	X-3319-004-1	WHEEL ASSY, REVERSE
357	3-318-334-00	SPRING, COMPRESSION
358	3-319-030-00	BELT

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	*A-3260-224-A	(UK,E)....MOUNTED PCB, MAIN
501	*A-3260-225-A	(AEP).....MOUNTED PCB, MAIN
501	*A-3260-226-A	(G-AEP)...MOUNTED PCB, MAIN
C1	1-163-150-00	CERAMIC CHIP 3PF 0.25PF 50V
C2	1-102-958-00	CERAMIC 20PF 5% 50V
C3	1-102-947-00	CERAMIC 10PF 5% 50V
C4	1-161-032-85	CERAMIC 0.01MF 20% 25V
C5	1-161-249-00	(UK,E)....CERAMIC 1.5PF 20% 50V
C5	1-161-250-00	(AEP).....CERAMIC 1.8PF 20% 50V
C5	1-161-251-00	(G-AEP)...CERAMIC 2.2PF 20% 50V
C6	1-163-059-00	CERAMIC CHIP 0.01MF 10% 50V
C7	1-161-032-85	CERAMIC 0.01MF 20% 25V
C8	1-161-032-85	CERAMIC 0.01MF 20% 25V
C9	1-163-059-00	CERAMIC CHIP 0.01MF 10% 50V
C10	1-161-032-85	CERAMIC 0.01MF 20% 25V
C11	1-161-032-85	CERAMIC 0.01MF 20% 25V
C12	1-102-865-00	CERAMIC 8PF 0.5PF 50V
C13	1-163-416-91	(AEP,UK,E)...CERAMIC CHIP 24PF 5% 50V
C13	1-163-417-91	(G-AEP).....CERAMIC 27PF 5% 50V
C14	1-102-505-00	CERAMIC 6PF 0.5PF 50V
C15	1-131-453-00	TANTALUM 0.22MF 20% 16V
C16	1-163-059-00	CERAMIC CHIP 0.01MF 10% 50V
C17	1-163-063-00	CERAMIC CHIP 0.022MF 10% 50V
C18	1-102-865-00	CERAMIC 8PF 0.5PF 50V
C19	1-123-617-00	ELECT 10MF 20% 16V
C20	1-102-106-00	CERAMIC 100PF 10% 50V
C21	1-163-063-00	CERAMIC CHIP 0.022MF 10% 50V

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CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···,
UPC···: μPC,
UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C22	1-163-063-00	CERAMIC CHIP	0.022MF	10%	50V
C23	1-163-059-00	CERAMIC CHIP	0.01MF	10%	50V
C24	1-161-036-00	CERAMIC	0.047MF	20%	25V
C25	1-163-063-00	CERAMIC CHIP	0.022MF	10%	50V
C26	1-163-047-00	CERAMIC CHIP	0.001MF	10%	50V
C27	1-163-063-00	CERAMIC CHIP	0.022MF	10%	50V
C28	1-123-616-00	ELECT	4.7MF	20%	25V
C29	1-161-028-85	CERAMIC	0.0022MF	20%	25V
C30	1-102-114-00	CERAMIC	470PF	10%	50V
C31	1-123-617-00	ELECT	10MF	20%	16V
C32	1-131-502-00	TANTALUM	4.7MF	20%	6.3V
C33	1-123-296-00	ELECT	220MF	20%	6.3V
C34	1-163-059-00	CERAMIC CHIP	0.01MF	10%	50V
C35	1-161-034-00	CERAMIC	0.022MF	20%	25V
C36	1-123-617-00	ELECT	10MF	20%	16V
C37	1-163-059-00	CERAMIC CHIP	0.01MF	10%	50V
C38	1-124-253-00	ELECT	0.47MF	20%	50V
C40	1-124-255-00	ELECT	1MF	20%	50V
C41	1-124-255-00	ELECT	1MF	20%	50V
C42	1-123-613-00	ELECT	3.3MF	20%	50V
C43	1-130-471-00	MYLAR	0.001MF	5%	50V
C44	1-123-611-00	ELECT	1MF	20%	50V
C45	1-123-618-00	ELECT	22MF	20%	6.3V
C46	1-161-034-00	CERAMIC	0.022MF	20%	25V
C47	1-161-034-00	CERAMIC	0.022MF	20%	25V
C48	1-124-245-00	ELECT	4.7MF	20%	25V
C49	1-123-616-00	ELECT	4.7MF	20%	25V
C50	1-162-282-31	CERAMIC	100PF	10%	50V
C51	1-162-110-00	CERAMIC	0.001MF	10%	50V
C101	1-162-292-31	CERAMIC	680PF	10%	50V
C102	1-123-647-00	ELECT	47MF	2%	6.3V
C103	1-102-945-85	CERAMIC	8PF	0.5PF	50V
C104	1-161-013-00	CERAMIC	0.01MF	10%	25V
C105	1-124-461-11	ELECT	4.7MF	20%	16V
C106	1-123-611-00	ELECT	1MF	20%	50V
C107	1-163-047-00	CERAMIC CHIP	0.001MF	10%	50V
C109	1-131-343-00	TANTALUM	0.22MF	20%	35V
C110	1-131-415-00	TANTALUM	0.68MF	20%	16V
C111	1-102-973-00	CERAMIC	100PF	10%	50V
C201	1-162-292-31	CERAMIC	680PF	10%	50V
C202	1-162-292-31	CERAMIC	680PF	10%	50V
C203	1-102-945-85	CERAMIC	8PF	0.5PF	50V
C204	1-161-013-00	CERAMIC	0.01MF	10%	25V
C205	1-124-231-00	ELECT	4.7MF	20%	16V
C206	1-123-611-00	ELECT	1MF	20%	50V
C207	1-102-074-00	CERAMIC	0.001MF	10%	50V
C209	1-131-343-00	TANTALUM	0.22MF	20%	35V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C210	1-131-415-00	TANTALUM	0.68MF	20%	16V
C211	1-163-181-00	CERAMIC CHIP	100PF	10%	50V
C301	1-124-224-00	ELECT	47MF	20%	6.3V
C302	1-124-224-00	ELECT	47MF	20%	6.3V
C303	1-124-222-00	ELECT	22MF	20%	6.3V
C304	1-124-430-00	ELECT	22MF	20%	4V
C305	1-131-391-00	TANTAL	22MF	20%	3.15V
C306	1-124-434-00	ELECT	220MF	20%	4V
C307	1-124-433-00	ELECT	100MF	20%	4V
C308	1-124-434-00	ELECT	220MF	20%	4V
C309	1-124-433-00	ELECT	100MF	20%	4V
C310	1-162-199-00	(AEP)....ELECT	10PF	5%	50V
C311	1-162-282-00	(E,UK)...ELECT	10PF	10%	50V
C601	1-131-418-00	TANTAL	1MF	10%	10V
C602	1-131-426-00	TANTAL	10MF	10%	3.15V
C603	1-124-430-00	ELECT	22MF	20%	4V
CF1	1-527-958-91	FILTER, CERAMIC			
CT1	1-151-415-21	CAP, TUNING, POLYETHYLENE			
CT2	1-151-415-21	CAP, TUNING, POLYETHYLENE			
CT3	1-151-415-21	CAP, TUNING, POLYETHYLENE			
CT4	1-151-415-21	CAP, TUNING, POLYETHYLENE			
CV1	1-151-415-21	CAP, TUNING, POLYETHYLENE			
CV2	1-151-415-21	CAP, TUNING, POLYETHYLENE			
CV3	1-151-415-21	CAP, TUNING, POLYETHYLENE			
CV4	1-151-415-21	CAP, TUNING, POLYETHYLENE			
D1	8-719-768-71	DIODE 1S2687S-1			
D2	8-719-106-34	DIODE SR632D (FM ST)			
D3	8-719-911-19	DIODE 1SS119			
D4	8-719-911-19	DIODE 1SS119			
D301	8-719-106-34	DIODE SR632D (BATT)			
FL1	1-231-892-00	FILTER, BANDPASS			
HP301	8-825-507-80	HEAD (PP227-3602F)			
IC1	8-759-801-16	IC LA1270			
IC2	8-759-201-14	IC TA7342P			
IC301	8-759-911-30	IC BA3304L			
IC302	8-759-201-23	IC TA7688P			
IC601	8-759-801-12	IC LA5523			
J301	1-507-812-00	JACK (PHONES)			
L1	1-425-349-00	COIL,FM RF			
L2	1-405-818-00	(AEP,UK,E)....COIL, FM OSC			
L2	1-459-410-00	(G-AEP).....COIL, FM OSC			
L3	1-401-973-00	ANTENNA, FERRITE-ROD (MW)			
L5	1-410-029-11	MICRO INDUCTOR 47UH			
L101	1-410-021-00	MICRO INDUCTOR 10UH			
L201	1-410-021-00	MICRO INDUCTOR 10UH			
L301	1-408-563-00	MICRO INDUCTOR 10UH			
L302	1-410-080-11	MICRO INDUCTOR 1UH			

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
M601	8-835-105-01	MOTOR, DC (DNR-6900A)			
MF1	1-567-058-00	FILTER, MECHANICAL			
Q1	8-729-119-32	TRANSISTOR 2SK193			
Q2	8-729-806-84	(UK,E).....TRANSISTOR 2SC668D-SP			
Q2	8-729-884-02	(AEP,G-AEP)...TRANSISTOR 2SC2840-D			
Q3	8-729-806-85	(UK,E).....TRANSISTOR 2SC668E-SP			
Q3	8-729-884-03	(AEP,G-AEP)...TRANSISTOR 2SC2840-E			
Q4	8-729-672-43	TRANSISTOR 2SC2724			
Q5	8-729-200-66	TRANSISTOR 2SK192A			
Q6	8-729-245-83	TRANSISTOR 2SC2458			
Q7	8-729-245-83	TRANSISTOR 2SC2458			
Q601	8-729-245-83	TRANSISTOR 2SC2458			
R1	1-247-828-00	CARBON	750	5%	1/6W
R2	1-247-807-00	CARBON	100	5%	1/6W
R3	1-247-889-00	CARBON	270K	5%	1/2W
R4	1-216-025-00	METAL CHIP	100	5%	1/10W
R5	1-216-093-00	METAL CHIP	68K	5%	1/10W
R6	1-247-819-00	CARBON	330	5%	1/6W
R7	1-247-807-00	CARBON	100	5%	1/6W
R8	1-247-805-00	CARBON	82	5%	1/6W
R9	1-216-025-00	METAL CHIP	100	5%	1/10W
R10	1-247-829-00	(E,UK).....CARBON	820	5%	1/6W
R10	1-247-835-00	(AEP,G-AEP)...CARBON	1.5K	5%	1/6W
R11	1-247-877-00	CARBON	82K	5%	1/6W
R12	1-247-793-00	CARBON	27	5%	1/6W
R13	1-216-097-00	METAL CHIP	100K	5%	1/10W
R14	1-247-825-00	CARBON	560	5%	1/6W
R15	1-216-025-00	METAL CHIP	100	5%	1/10W
R16	1-216-049-00	METAL CHIP	1K	5%	1/10W
R17	1-247-865-00	CARBON	27K	5%	1/6W
R18	1-247-877-00	CARBON	82K	5%	1/6W
R19	1-247-799-00	CARBON	47	5%	1/6W
R20	1-247-879-00	CARBON	100K	5%	1/6W
R21	1-216-039-00	METAL CHIP	390	5%	1/10W
R22	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R23	1-247-849-00	CARBON	5.6K	5%	1/6W
R24	1-216-115-00	METAL CHIP	560K	5%	1/10W
R25	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R26	1-247-827-00	CARBON	680	5%	1/6W
R27	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R28	1-216-049-00	METAL CHIP	1K	5%	1/10W
R29	1-216-073-00	METAL CHIP	10K	5%	1/10W
R30	1-247-817-00	CARBON	270	5%	1/6W
R31	1-247-789-00	CARBON	18	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R32	1-247-847-00	CARBON	4.7K	5%	1/6W
R33	1-247-847-00	CARBON	4.7K	5%	1/6W
R34	1-247-841-00	CARBON	2.7K	5%	1/6W
R35	1-216-045-00	METAL CHIP	680	5%	1/10W
R101	1-216-109-00	METAL CHIP	330K	5%	1/10W
R102	1-247-815-00	CARBON	220	5%	1/6W
R103	1-247-859-00	CARBON	15K	5%	1/6W
R104	1-247-855-00	CARBON	10K	5%	1/6W
R105	1-216-089-00	METAL CHIP	47K	5%	1/10W
R106	1-247-825-00	CARBON	560	5%	1/6W
R107	1-216-049-00	METAL CHIP	1K	5%	1/10W
R108	1-216-304-00	METAL CHIP	3.3	5%	1/10W
R109	1-247-857-00	CARBON	12K	5%	1/6W
R201	1-247-891-00	CARBON	330K	5%	1/6W
R202	1-247-815-00	CARBON	220	5%	1/6W
R203	1-247-859-00	CARBON	15K	5%	1/6W
R204	1-247-855-00	CARBON	10K	5%	1/6W
R205	1-216-089-00	METAL CHIP	47K	5%	1/10W
R206	1-247-825-00	CARBON	560	5%	1/6W
R207	1-216-049-00	METAL CHIP	1K	5%	1/10W
R208	1-216-304-00	METAL CHIP	3.3	5%	1/10W
R209	1-247-857-00	CARBON	12K	5%	1/6W
R301	1-247-815-00	CARBON	220	5%	1/6W
R302	1-247-816-00	CARBON	240	5%	1/6W
R303	1-216-049-00	METAL CHIP	1K	5%	1/10W
R601	1-246-790-00	CARBON	3.9K	5%	1/8W
R602	1-216-077-00	CARBON CHIP	15K	5%	1/10W
R603	1-216-075-00	CARBON CHIP	12K	5%	1/10W
R604	1-247-865-00	CARBON	27K	5%	1/6W
R605	1-247-873-00	CARBON	56K	5%	1/6W
RV1	1-230-035-00	RES, ADJ, CARBON 10K			
RV301	1-230-327-11	RES, VAR, CARBON 10K/10K (VOLUME)			
RV601	1-230-035-00	RES, ADJ, CARBON 10K (SPEED)			
S2	1-554-061-00	SWITCH, SLIDE (BAND)			
S301	1-554-123-00	SWITCH, SLIDE (TAPE)			
S302	1-554-295-00	SWITCH, SLIDE (FUNCTION)			
S303	1-554-024-00	SWITCH, LEAF (POWER)			
T1	1-404-126-31	FM IFT			
T2	1-406-017-00	COIL, OSCILLATOR (MW)			
T3	1-404-398-00	TRANSFORMER, IF			
T4	1-404-546-11	COIL (FM DETECTOR)			
TH601	1-800-070-XX	THERMISTOR 5K			
THP601	1-806-881-00	THERMISTOR 180			

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- ATl capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

WM-F5

SERVICE MANUAL

AEP Model

No. 2
April, 1984

SUPPLEMENT

File this supplement with the Service Manual.

Orange type has been added in AEP model.
Add the following parts in the service manual on page 34.

GENERAL SECTION

No.	*Part No.*	*Description*
22	3-312-893-01	(ORG) ..... LABEL, MODEL NUMBER (AEP)
47	X-3312-827-6	(ORG) ..... KNOB, TUNING ASSY
48	X-3312-828-6	(ORG) ..... PLATE (A), ORNAMENTAL ASSY
49	X-3312-829-6	(ORG) ..... PLATE (B), ORNAMENTAL ASSY
50	X-3312-845-1	(ORG) ..... CONTROL, CABINET ASSY
51	X-3312-831-6	(ORG) ..... CABINET, CASSETTE ASSY

ACCESSORY & PACKING MATERIALS

Part No.	*Description*
3-312-877-00	CUSHION (UPPER)
3-701-318-00	(ORG) ..... LABEL, PRODUCT COLOR

STEREO CASSETTE PLAYER

SONY®

9-951-133-84

Sony Corporation

English
84D0553-1
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WM-F5

SERVICE MANUAL

AEP Model

No. 1
January, 1984

SUPPLEMENT

File this supplement with the Service Manual.

Red type and violet type have been added in AEP model.
Add the following parts in the service manual on page 34.

GENERAL SECTION

No.	Part No.	Description
22	3-312-839-01	LABEL, MODEL NUMBER (AEP)
15	3-312-840-21	(VIO)...SHEET (VOL), ORNAMENTAL
15	3-312-840-41	(RED)...SHEET (VOL), ORNAMENTAL
47	X-3312-827-3	(VIO)...KNOB, TUNING ASSY
47	X-3312-827-5	(RED)...KNOB, TUNING ASSY
48	X-3312-828-3	(VIO)...PLATE(A), ORNAMENTAL ASSY
48	X-3312-828-5	(RED)...PLATE(A), ORNAMENTAL ASSY
49	X-3312-829-3	(VIO)...PLATE(B), ORNAMENTAL ASSY
49	X-3312-829-5	(RED)...PLATE(B), ORNAMENTAL ASSY
50	X-3312-830-4	(VIO)...CONTROL, CABINET ASSY
50	X-3312-830-3	(RED)...CONTROL, CABINET ASSY
51	X-3312-831-3	(VIO)...CABINET, CASSETTE ASSY
51	X-3312-831-5	(RED)...CABINET, CASSETTE ASSY

ACCESSORY & PACKING MATERIALS

Part No.	Description
3-312-877-00	CUSHION (UPPER)
3-701-311-00	(RED)...LABEL, PRODUCT COLOR
3-701-316-00	(VIO)...LABEL, PRODUCT COLOR

STEREO CASSETTE PLAYER

SONY®

9-951-133-83

Sony Corporation

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WM-F9

SERVICE MANUAL

AEP Model

No. 1
October, 1984

SUPPLEMENT

File this supplement with the Service Manual.

Silver type has been designed. Add the following parts to the parts list in the service manual.

GENERAL SECTION

No.	Part No.	Description
25	3-319-017-21	(GOLD).....LID, BATTERY CASE
25	3-319-017-01	(SILVER)...LID, BATTERY CASE
46	X-3319-008-4	(GOLD).....CABINET (B)
46	X-3319-008-5	(SILVER)...CABINET (B)
47	X-3319-009-5	(GOLD: E, UK, AEP)...LID, CASSETTE ASSY
47	X-3319-009-6	(GOLD: G · AEP).....LID, CASSETTE ASSY
47	X-3319-009-7	(SILVER: E, AEP).....LID, CASSETTE ASSY
47	X-3319-009-8	(SILVER: G · AEP).....LID, CASSETTE ASSY

ACCESSORY & PACKING MATERIALS

Part No.	Description
3-703-912-01	(GOLD).....LABEL, COLOR
3-703-921-01	(SILVER)...LABEL, COLOR

FM/AM STEREO
CASSETTE-PLAYER

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